AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1. (currently amended) A method for developing context dependent acoustic models, comprising the steps of:

developing a low-dimensional space from training speech data obtained from a plurality of training speakers;

representing the training speech data from each of said plurality of training speakers as the combination of a speaker dependent component and a speaker independent component;

representing said speaker dependent component as centroids within said low-dimensional space;

representing said speaker independent component as linear transformations of said centroids; and

performing maximum likelihood re-estimation on said training speech data of at least one of said low-dimensional space, said centroids, and said ~~offsets~~ linear transformations to represent context dependent acoustic model.

2. (original) The method of claim 1 wherein said training speech data is separated by identifying context dependent data and using said context dependent data to identify said speaker independent data.

3.   (original)   The method of claim 1 wherein said training speech data is separated by identifying context independent data and using said context independent data to identify said speaker dependent data.

4.   (original)   The method of claim 1 wherein said maximum likelihood re-estimation step is performed iteratively.

5.   (currently amended)The method of claim 1 wherein said linear transformations are effected as an offsets from said centroids.

6.   (original)   The method of claim 1 wherein said maximum likelihood re-estimation step generates a re-estimated low-dimensional space, re-estimated centroids and re-estimated offsets and wherein said context dependent acoustic models are constructed using said re-estimated low-dimensional space and said re-estimated offsets.

7.   (original)   The method of claim 1 wherein said linear transformations of said centroids are represented in tree data structures corresponding to individual sound units.

8.   (original)   The method of claim 5 wherein said offsets are represented in tree data structures corresponding to individual sound units.

9.   (original)   The method of claim 1 further comprising:

using said speaker dependent component to perform speaker verification.

10.   (original)   The method of claim 1 further comprising:

using said speaker dependent component to perform speaker

identification.

11.   (new) A method for developing context dependent acoustic models,

comprising the steps of:

developing a low-dimensional space from training speech data obtained

from a plurality of training speakers;

representing the training speech data from each of said plurality of training

speakers as the combination of a speaker dependent component and a speaker

independent component;

representing said speaker dependent component as centroids within said

low-dimensional space;

representing said speaker independent component as linear

transformations of said centroids; and

performing maximum likelihood re-estimation on said training speech data

of at least one of said low-dimensional space, said centroids, and said linear

transformations to represent context dependent acoustic model, wherein said linear

transformations are effected as offsets from said centroids, said maximum likelihood re-

estimation step generates a re-estimated low-dimensional space, re-estimated centroids and re-estimated offsets and wherein said context dependent acoustic models are constructed using said re-estimated low-dimensional space and said re-estimated offsets.

12.   (new) The method of claim 11 wherein said linear transformations of said centroids are represented in tree data structures corresponding to individual sound units.

13.   (new) The method of claim 11 wherein said offsets are represented in tree data structures corresponding to individual sound units.

14.   (new) The method of claim 11 further comprising:

using said speaker dependent component to perform speaker verification.

15.   (new) The method of claim 11 further comprising:

using said speaker dependent component to perform speaker identification.

16.   (new) The method of claim 11 wherein said training speech data is separated by identifying context dependent data and using said context dependent data to identify said speaker independent data.

17. (new) The method of claim 11 wherein said training speech data is separated by identifying context independent data and using said context independent data to identify said speaker dependent data.

18. (new) The method of claim 11 wherein said maximum likelihood re-estimation step is performed iteratively.